AMENDMENTS TO THE SPECIFICATION:

Please delete the paragraph on page 3, lines 15-27, and replace it with the following paragraph:

The use of beta-synuclein and in particular peptides derived therefrom in connection with alpha-synuclein is known; see, for example, octapeptides according to WO-A-02/04482 and three additional peptides in WO-A-02/04625. WO-A-002/0020 and WO-A-01/60794 describe the use of beta-synuclein as a whole molecule or methods that increase its expression in vivo for therapy of neurological diseases that are associated with alpha-synuclein. WO-A-01/60794 in particular also teaches the use of a peptide with the amino acid sequence MDVFMKGLSMAKEGV (SEQ ID NO: 47), which corresponds to the N-terminal amino acids 1 to 15 of the beta-synuclein, for preventing the binding of alpha-synuclein and beta-amyloid. WO-A-01/60794, however, does not yield any evidence of an actual protective action of this peptide on living, neuronal cells and does not contain any references to other active peptides in this sequence range. Shorter peptides were very advantageous for use as pharmaceutical agents, however, since in general with decreasing chain length, the problems of chemical and biological stability as well as bioavailability are greatly reduced.

Please delete the paragraph on page 4, line 1, to page 5, line 21, and replace it with the following paragraph:

Presentation of the Invention

The object of this invention is to avoid the drawbacks that are known from the prior art. According to the invention, peptides are proposed that are selected from the group

DVFMKGLSMAKEGV (SEQ ID NO: 1)

VFMKGLSMAKEGV (SEQ ID NO: 2)

FMKGLSMAKEGV (SEQ ID NO: 3)

MKGLSMAKEGV (SEQ ID NO: 4)

KGLSMAKEGV (SEQ ID NO: 5)

GLSMAKEGV (SEQ ID NO: 6)

LSMAKEGV (SEQ ID NO: 7)

SMAKEGV (SEQ ID NO: 8)

MAKEGV (SEQ ID NO: 9)

AKEGV (SEQ ID NO: 10)

KEGV (SEQ ID NO: 11)

MDVFMKGLSMAKEG (SEQ ID NO: 12)

MDVFMKGLSMAKE (SEQ ID NO: 13)

MDVFMKGLSMAK (SEQ ID NO: 14)

MDVFMKGLSMA (SEQ ID NO: 15)

MDVFMKGLSM (SEQ ID NO: 16)

MDVFMKGLS (SEQ ID NO: 17)

MDVFMKGL (SEQ ID NO: 18)

MDVFMKG (SEQ ID NO: 19)

MDVFMK (SEQ ID NO: 20)

MDVFM (SEQ ID NO: 21)

MDVF (SEQ ID NO: 22)

DVFMKGLSMAKEG (SEQ ID NO: 23)

DVFMKGLSMAKE (SEQ ID NO: 24)

DVFMKGLSMAK (SEQ ID NO: 25)

DVFMKGLSMA (SEQ ID NO: 26)

DVFMKGLSM (SEQ ID NO: 27)

DVFMKGLS (SEQ ID NO: 28)

DVFMKGL (SEQ ID NO: 29)

DVFMKG (SEQ ID NO: 30)

DVFMK (SEQ ID NO: 31)

DVFM (SEQ ID NO: 32)

DVF (SEQ ID NO: 33)

GLSMAKEG (SEQ ID NO: 34)

GLSMAKE (SEQ ID NO: 35)

GLSMAK (SEQ ID NO: 36)

GLSMA (SEQ ID NO: 37)

GLSM (SEQ ID NO: 38)

GLS (SEQ ID NO: 39)

GL (SEQ ID NO: 40)

LSMAKEG (SEQ ID NO: 41)

LSMAKE (SEQ ID NO: 42)

LSMAK (SEQ ID NO: 43)

LSMA (SEQ ID NO: 44)

LSM (SEQ ID NO: 45)

LS (SEQ ID NO: 46)

Please delete the paragraph on page 5, line 26, to page 6, line 2, and replace it with the following paragraph:

Surprisingly enough, it turned out, as could not have been derived from the prior art, that even individual peptides, which comprise only half or even only one-third of the sequence of 15 amino acids that is described in WO-0160794, in models of pathological processes, as they are present or expected in neurodegenerative diseases, exert excellent action; for example the heptapeptide SMAKEGV (SEQ ID NO: 8) and the pentapeptide LSMAK (SEQ ID NO: 43).

Please delete the paragraph on page 9, lines 18-21, and replace it with the following paragraph:

As a whole, in this test, 31 of 45 tested peptide fragments had neuroprotective, anti-apoptotic potential. In this case, substances BH#16 and BH#37, whose effects were 150% over the effects of the control (=100%), were especially efficient. In the case of octapeptide BH#7 (LSMAKEGV sequence (SEQ ID NO: 7)), the effects were approximately 450%.

Please delete the header to Table 1 on page 13, and replace it with the following header:

Table 1:
Amino Acid Sequences of the Tested Beta-Synuclein Peptides and Results Thereof in the Biological Test Systems of Examples 1 to 6 (SEQ ID NOS 1-45, respectively in order of appearance)

Please delete Table 2 on page 14, and replace it with the following Table:

Table 2:
Summarized Presentation of the Most Significant Beta-Synuclein Peptides with Respect to Their Neuroprotective Action

Code	AA Sequence:	AA	Active in:	Comments
BH#8	SMAKEGV (SEQ ID NO: 8)	7	5 of 7 assays	Small peptide, extremely high effects, active in a great number of assays, therapeutically advantageous
BH#13	MDVFMKGLSMAKE (SEQ ID NO: 13)	13	5 of 7 assays	Active in a great number of assays
BH#16	MDVFMKGLSM (SEQ ID NO: 16)	10	4 of 7 assays	Active in a great number of assays
BH#26 BH#2	DVFMKGLSMAK (SEQ ID NO: 25)	11 10	2 of 7 assays	Especially advantageous as a group, since very

7 BH#2 8	DVFMKGLSMA (SEQ ID NO: 26) DVFMKGLSM (SEQ ID NO: 27)	9	4 of 7 assays 4 of 7 assays	similar, very high effects from the amino acid sequence
BH#4 6	LSMAK (SEQ ID NO: 43)	5	2 of 7 assays	High effects, smallest peptide, therapeutically advantageous